We Claim:

1. A method of forge welding tubulars, the method comprising the steps of:

heating the tubular ends to be joined in a welding chamber to a predetermined temperature while the heated tubular ends are maintained substantially aligned and parallel relative to each other at a spacing;

pressing the heated tubular ends against each other while a reducing shield gas is injected into the chamber; and

cooling the tubular ends;

wherein during at least part of the heating, pressing and/or cooling steps the positions of the tubular ends are monitored by a number of circumferentially spaced cameras which are coupled to a pyrometric and position monitoring system, which automatically adjusts the position of the tubular ends relative to each other and the heat supplied to the tubular ends during the heating step at least until the pyrometric monitoring system indicates that the tubular end faces have reached a predetermined temperature, whereupon the tubular ends are moved towards each other along a distance which exceeds the spacing monitored between the tubular ends during the heating step with a selected extra distance.

2. The method of claim 1, wherein said extra distance is selected such that the tubular ends are firmly pressed against each other and deform such that the amount of external and/or internal upset of the tubular ends in the welding zone is limited to an acceptable level and wherein said reducing shield gas is injected into the chamber to remove oxides from the heated tubular ends in

order to form a forge weld with a minimal amount of oxide inclusions and other irregularities.

3. The method of claim 1, wherein a set of at least three cameras is arranged at regular circumferential spacing around the welding zone and the position monitoring system controls a gripping assembly which holds at least one of the tubulars such that during the heat up phase a spacing of only a few millimeters is maintained between the heated tubular end faces and the tubular ends moved towards each other during the forge welding step over a distance which exceeds said spacing by less than a few millimeters.

4. The method of claim 1, wherein a non-explosive flush gas mixture of a substantially inert gas and a reducing gas is injected into the welding chamber.

5. The method of claim 4, wherein the non-explosive flush gas mixture comprises more than 90% by volume of nitrogen, argon and/or helium and more than 2 % by volume of hydrogen.

6. The method of claim 1, wherein the joined tubulars are well and/or oilfield tubulars, which are joined together by forge welding at or near a drilling rig, an offshore platform, a pipelaying unit, or an oil and/or gas production facility.

7. The method of claim 1, wherein during a heating step a predetermined spacing is maintained between the tubular ends to be joined by inserting a plurality of heat resistant spacing elements of a substantially equal thickness between the tubular ends, pressing the tubular pipe ends against the spacing elements during the heat up phase and removing the spacing elements from the spacing before the tubular ends are pressed together to join them by forge welding.

8. The method of claim 7, wherein the tubular ends are heated by electrodes which transmit a high frequency current through the tubular wall to heat the tubular ends and the spacing elements each have a thickness less than 5 millimeters.

9. The method of claim 8, wherein an assembly of three or more spacing elements is inserted between the tubular ends, which spacing elements each have a thickness less than 2 millimeters.

10. The method of claim 7 wherein the spacing elements are equipped with sensors which detect the temperature, compression force and/or contact point between the spacing element and the adjacent tubular end, which sensors are coupled to a welding control assembly which controls tubular gripping equipment such that the tubular ends are substantially aligned and are not tilted relative to each other during the heat up and the subsequent forge welding phase and which pulls the spacing elements away of the spacing when the tubular ends have reached a predetermined temperature.

11. The method of claim 7, wherein the spacing elements are equipped with flush gas injection channels which inject a flushing gas around the tubular ends and/or into the interior of the tubulars to be joined during the heat up phase.

12. The method of claim 1, wherein a rigid foam is injected into the interior of the tubulars to be joined before the heat up phase, which foam provides a temporary seal in the interior of the tubulars adjacent to the tubular ends to be joined during the forge welding operation and which seal is removed from the interior of the tubulars after the forge welding operation.

13. A tubular string comprising tubulars that have been joined by a forge welding method the method comprising the steps of:

heating the tubular ends to be joined in a welding chamber to a predetermined temperature while the heated tubular ends are maintained substantially aligned and parallel relative to each other at a spacing;

pressing the heated tubular ends against each other while a reducing shield gas is injected into the chamber; and

cooling the tubular ends;

wherein during at least part of the heating, pressing and/or cooling steps the positions of the tubular ends are monitored by a number of circumferentially spaced cameras which are coupled to a pyrometric and position monitoring system, which automatically adjusts the position of the tubular ends relative to each other and the heat supplied to the tubular ends during the heating step at least until the pyrometric monitoring system indicates that the tubular end faces have reached a predetermined temperature, whereupon the tubular ends are moved towards each other along a distance which exceeds the spacing monitored between the tubular ends during the heating step with a selected extra distance.

14. The tubular string of claim 13, wherein the joined tubulars are oilfield tubulars.

15. The tubular string of claim 13 wherein the tubular string forms part of a casing or production tubing in an oil and/or gas production well.

16. The tubular string of claim 13, wherein the tubular string forms part of a steel vertical or catenary riser between an offshore oil and/or gas production platform and a subsea oil and/or gas production well.

17. The tubular string of claim 13, wherein the tubular string forms part of a tubular leg of a steel offshore structure.

18. The tubular string of claim 13, wherein the tubular string forms part of a steel tubular tensioned leg of a tension leg platform.

19. A monitoring system comprising:

a plurality of circumferentially spaced cameras;

a pyrometric and position monitoring system, operatively associated with at least one of the cameras which automatically adjusts the position of tubular ends relative to each other and the heat supplied to the tubular ends.

20. The monitoring system of claim 19 wherein the monitoring system causes the tubular ends to be moved towards each other along a distance which exceeds the spacing monitored between the tubular ends during heating with a selected extra distance after the pyrometric monitoring system indicates that the tubular end faces have reached a predetermined temperature.